THERMAL TEST CHIP DETERMINES MECHANICAL INTEGRITY

DAISY CHAIN CONNECTION OF TTC CELLS AIDS MECHANICAL STRESS TESTING

SANTA CLARA, CA. — February 16, 2010 — Thermal Engineering Associates, Inc. (TEA) announces a new application of its Thermal Test Chip family, TTC. The TTC has recently been successfully applied to mechanical stress testing and structural verification by two TEA customers.

The TTC-1002 thermal test chip is available as a unit cell 2.5mm on a side or as a cell array of up to 100mm on a side. When packaged by TEA, the TTC becomes the Thermal Test Vehicle (TTV) family of 27mm square BGA products. In its flip chip array configuration, the TTV contains a series of substrate contacts at the corners of each package as well as other strategic locations which are specifically designed to facilitate mechanical stress testing. Under mechanical stress, if any daisy-chain ball set connection opens or there are any shorts created within the package, these failures are easily detected by a quick electrical test.

The TTC-1002 was first shipped to customers in May of 2008 for thermal testing applications and it has received tremendous acceptance. Some customers are on back order.

"When I developed the TTC-1002 for thermal testing," said TEA President, Bernie Siegal, *"I had firmly in mind that it would also serve as an excellent vehicle for mechanical testing and structural verification."*

Pricing and Availability TTC-1002
For a Product Specification Sheet, pricing, and availability contact TEA.

About Thermal Engineering Associates:
TEA and its president, Bernie Siegal, have been providing thermal test and measurement hardware, software, and consulting services since 1973. Siegal has been chairman of the JEDEC JC15 committee and is the principle author of many MILSTD 750 thermal test methods. All major semiconductor companies, packaging companies, and many system level OEMs have utilized TEA products and/or services during its long history. Siegal is a founding member of IEEE SEMI-THERM, has delivered numerous papers and articles on thermal testing, and is frequently sought out as a lecturer and expert in the field. For more information on products and services, go to www.thermengr.com.

Media Contact:
Bill Ribble
bribble@thermengr.net
(408) 202-3539

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